

conspicuous examples among the woody plants that occur to me: *Pinus Strobus*, *Tsuga*, *Juniperus depressa*, *Hicoria*, *Betula* spp., *Alnus*, *Fagus*, *Castanea*, *Quercus montana*, *Ulmus*, *Liriodendron*, *Rhus glabra*, *Tilia*, *Fraxinus*. (Where a generic name stands alone it means that no species of that genus is common on the Cape.)

Most of these probably prefer richer soils than the average of those on Cape Cod, while a few are partial to rocky places. The climate may be a little too warm for *Pinus Strobus*, for that is also comparatively scarce in Connecticut and almost unknown outside of cultivation on Long Island. Although I have not visited the Cape in spring, I would expect to find most of the handsome spring flowers that are characteristic of rich shady woods nearly throughout the eastern United States rare or absent there too.

Although few species may be added to the known flora of Cape Cod hereafter by floristic botanists, and most of the vegetation has been more or less altered by civilization, there are still many problems in plant sociology, demography, geography, and ecology there that will amply repay investigation by persons interested in such matters.

## OBSERVATIONS ON THE SPORES OF *SCHIZO- PHYLLUM COMMUNE*

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This cosmopolitan fungus is classified in the white spore group of agarics. The hymenium appears to vary in color apparently depending on age. Young sporophores have flesh-colored hymenia, while in the more mature the color may be white to purplish cinereous.

In 1917 I\* observed in cultures of mature sporophores that where the spores were shed in mass upon the agar surface they were pink or distinctly salmon in color. The mass of spores making forty spore prints from material collected in the field.

\* Mem. Torrey Bot. Club 17: 326-333. 1918.

appeared slimy and so striking in color that at first it was thought to be a contamination of some bacterial growth.

This year I have had opportunity to support this observation by The material was secured at various times from sporophores growing on a beech stump. The successful contrast for color of the



spores as well as spore prints was obtained on black glazed paper. A number of spore prints from sporophores of various ages is shown in the figure.

The sporophores were placed upon the black glazed paper under bell jars at room temperature. In order to secure a perfect print it is necessary to select sporophores which will lie flat on the paper.

When the hymenium is concave the part not touching the paper fails to show a perfect impression of the lamellae.

Sporophores collected in January and February in a frozen condition were most favorable material for spore prints. The frozen sporophores under room temperature thaw out quickly and in four hours a light spore print is obtained. In twelve to twenty-four hours a heavy spore print would be made. The heavy spore prints brought out the dominant pink or salmon color of the spore mass. Material collected in March, but which had become dried out several times with exposure, was not so favorable for spore prints. Such sporophores collected early in the morning and still moist would not show spore prints until after eight or ten hours at room temperature. Attempts to secure spore prints at higher temperature, such as over a steam radiator, were negative. It would appear that a gradual drying is the condition favorable for spore discharge rather than sudden drying out.

The use of black glazed paper was found most favorable for demonstrating spore prints as well as the pink color of the spore mass. The characteristic split lamella is well illustrated by the spore prints. With respect to the color of the spore mass, this agaric would appear to be related with the rhodosporae rather than the leucosporae.

Since this fungus is so cosmopolitan material can be secured for class demonstration at times when field agarics are not available.

#### SHORTER NOTES

ANOTHER *SONCHUS* FOR AMERICA.—The genus *Sonchus* is not known to be native in the Western Hemisphere. There are nearly fifty species known from the Old World, and only three—all rather coarse weeds—have heretofore become widely naturalized in America. A fourth species is locally naturalized in southern California. Last summer, however, a fifth species, *Sonchus uliginosus*, a native of southern Russia, was found established in fields in Northampton County, Pennsylvania. We have specimens, preserved in